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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/846,566	04/27/2001	Shaohan J. Chou	CHOU 2- 9 - 5	4128

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EXAMINER	
DUONG, DUC T	

ART UNIT	PAPER NUMBER
2663	

DATE MAILED: 06/16/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/846,566	CHOU ET AL.	
	Examiner	Art Unit	
	Duc T. Duong	2663	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *26 January 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,4,5 and 7-20* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *1,4,5,7 and 8* is/are allowed.

6)☒ Claim(s) *9,11-14 and 18-20* is/are rejected.

7)☒ Claim(s) *10 and 15-17* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1. Applicant's arguments with respect to newly added claims 11-20 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

3. Claims 9, 11-14 and 18-20 are rejected under 35 U.S.C. 102(e) as being anticipated by Wang et al (US Patent 6,185,250 B1)

The applied reference has a common inventor with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in

the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

Regarding to claim 9, Wang discloses a method for training a receiving modem connected through a telephone network to correct for differences between a transmitted and a received symbol occasioned by network impairments including robbed bit signaling which preempts a least significant bit of a customer's data depending on the frame assigned by the network for such connection, comprising the steps of repetitively transmitting 70 a known symbol value over said connection 71 (fig. 7 col. 7 lines 16-19) to ascertain when said network impairment causes said symbol to be received at said modem as a higher or lower valued symbol (fig. 9 col. 7 lines 37-49; noted there are two levels for which to map the variation of received signal due to robbed bit signaling, the third bar correspond to lower value while all other bars correspond to a higher value); constructing a slicer table entry containing a higher or lower value of said symbol for said assigned frame (fig. 9 col. 7 lines 36-37); repeating said transmitting and said constructing for a number of different known training symbol levels to compete said slicer table (fig. 8 col. 7 lines 19-27; noted there are four RBS patterns for each 24 phase PCM sequence or frame); and re-configuring said slicer table for use on another frame assigned by said network (fig. 10 col. 7 lines 50-67).

Regarding to claims 11 and 19, Wang discloses a method of processing signals in a network employing robbed bit signaling (fig. 7-9), the method comprising receiving, at a receiver 72 of the network 71 (fig. 7 col. 7 lines 16-19), a signal (sample) corresponding to a training symbol (fig. 9 col. 7 lines 32-37); mapping said training

symbol to a first level or a second level, said first and second levels corresponding to variation in the received signal due to the robbed bit signaling (fig. 9 col. 7 lines 37-49; noted there are two levels for which to map the variation of received signal due to robbed bit signaling, the third bar correspond to one level while all other bars correspond to a second level); and repeating steps (a) and (b) for one or more frames to determine a pattern employed in the robbed bit signaling (fig. 8 col. 7 lines 19-27; noted note a 24 phase PCM sequence (frame) is used to determine each robbed bit signaling RBS pattern).

Regarding to claims 12 and 13, Wang discloses repeating steps receiving, mapping, and repeating for one or more other training symbols (fig. 8 col. 7 lines 24-27; noted there are four RBS patterns of the training symbols) and constructing a receiver constellation table (slicer table) based on the mapped first and second levels for the training symbols and the determined pattern (fig. 10 col. 53-67).

Regarding to claim 14, Wang discloses for each transmitter level, the receiver constellation table has two levels (fig. 9 col. 7 lines 37-49; noted there are two levels for which to map the variation of received signal due to robbed bit signaling, the third bar correspond to one level while all other bars correspond to a second level).

Regarding to claims 18 and 20, Zhang discloses transmitting the training symbol using a transmitter 70 of the network 71 (fig. 7 col. 7 lines 16-19).

Allowable Subject Matter

4. Claims 10 and 15-17 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

6. Claims 1, 4, 5, 7, and 8 are allowed.

The following is a statement of reasons for the indication of allowable subject matter: The prior art of record fails to teach or make obvious the step of or means for **"a constellation of symbol levels is determined by identifying the probability density function for each said number of different known training symbol levels"**, when such constellation table is considered within the specific structure of the method recited in claims 1 and 10. The prior art of record fails to teach or make obvious the step of or means for **"network preempting a least significant bit used to encode symbol levels during different phases of network frames, said repetitive transmitting of said known training symbol being continued throughout the duration of a plurality of said encoding frames"**, when the preempting is considered within the specific structure of the method recited in claim 5. The prior art of record fails to teach or make obvious the step of or means for **"forming a probability density function based on the sequence and determining the receiver constellation table based on the probability density function"**, when the forming and determining are considered within the specific structure of the method recited in claim 15.

Conclusion

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Duc T. Duong whose telephone number is 571-272-3122. The examiner can normally be reached on M-F (9:00 AM-5:00 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ricky Q. Ngo can be reached on 571-272-3139. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

DD
DD

RICKY NGO
PRIMARY EXAMINER
6/13/05